



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,996	04/10/2006	Yoshiki Nakagawa	UNI110.001APC	6606
20995 7590 07/15/2010 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER BOYLE, ROBERT C				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
07/15/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com
eOAPilot@kmob.com

Office Action Summary

Application No.

10/541,996

Applicant(s)

NAKAGAWA ET AL.

Examiner

ROBERT C. BOYLE

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 57-59, 62-65, 67-69 and 77-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 57-59, 62-65, 67-69 and 77-85 is/are rejected.
- 7) ☒ Claim(s) 57-58, 69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/14/2010 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The claim objection presented in the previous Office Action is withdrawn in view of the amendments.

Claim Objections

3. Claim 57 is objected to because of the following informalities: in the third line, "silyl" is misspelled. Appropriate correction is required.
4. Claim 58 is objected to because of the following informalities: in the third line, the words "crosslinkable" and "silyl" are misspelled. Appropriate correction is required.
5. Claim 69 is objected to because none of the compounds in the Markush group of compound (II) in claim 57 are polymers. Therefore, a separate claim reciting that none of those compounds are polymers is unnecessary.

Double Patenting

6. The Double Patenting rejection presented in the previous Office Action is withdrawn because the amendments to the instant claims make the instant claims patentably distinct over the claims of Patent 7,388,038. Notably, the claims of Patent '038 do not recite the presence of either an amine compound or a methyl ester, as required by instant claim 57.

Claim Rejections - 35 USC § 103

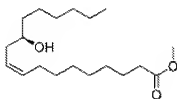
7. Claims 57-59, 62-64, 67-69, 77-81, 83-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fujita** (WO 00/20498). As the cited WO publication is in a non-English language, the English equivalent, US 2004/0029990 ("Fujita"), has been utilized in place of WO '498. All column and line number citations are made with respect to the above mentioned U.S. document.

8. As to claims 57-59, Fujita teaches a curable composition containing two components (A) a vinyl polymer, made with monomers such as methyl methacrylate or methyl acrylate, where the polymer has at least one crosslinking silyl group of the formula (1) at the terminus of the chain, (B) a curing catalyst which includes amines and the addition of dialkyl ester compounds such as butyl oleate and dibutyl sebacate can be added (abstract; ¶¶ 16-29, 37-39, 121-123, 227-228, 242). Fujita does not teach using dimethyl derivatives of the ester compounds.

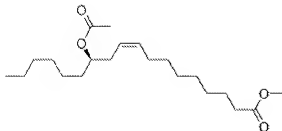
9. However, Fujita teaches that plasticizers such as butyl oleate, dioctyl adipate, isodecyl succinate, dioctyl sebacate, and dibutyl sebacate can be added (¶ 242). While the esters and diesters are not methyl esters, it is the examiner's position that it would have been obvious to one of ordinary skill in the art to expect similar beneficial results with compounds having only

additional $-CH_2-$ groups. Case law holds that homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by $-CH_2-$ groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). Therefore, using the methyl derivatives of the above diesters would have been obvious.

10. In the alternative, Fujita teaches using methyl acetylricinolate as a plasticizer (§ 242). It is the examiner's position that the methyl acetylricinolate taught by Fujita is of such close structural similarity to the claimed methyl ricinoleate as to be obvious over each other. A prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). Note that the chemical structure of methyl ricinoleate is:



and the chemical structure of methyl acetylricinolate is:



11. Both compounds have a number of structural similarities, a methyl ester group, a double bond at the C9-C10 atoms, a carbon chain 18 atoms long, and a polar functional group at the C12 position. While it is noted that an alcohol group is not the same as an acetyl group, it is the examiner's position that the number of other similarities between the two compounds would lead one of ordinary skill in the art to the conclusion that methyl ricinoleate and methyl acetylricinoleate have similar properties. Therefore, using the alcohol derivative would have been obvious in view of the acetyl derivative.

12. The rejection of claims 57-59, 62-65, 67-69, 77-81, 83-85 is adequately set forth in the discussion in ¶ 19-30 in the office action mailed on 12/16/2009 and is incorporated here by reference.

13. Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Fujita** in view of **Inoue** et al. (US 6,255,392).

14. The rejection is adequately set forth in paragraphs 35-37 in the office action mailed on 12/16/2009 and is incorporated here by reference.

15. Claims 57-59, 62-65, 67-69, 77-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ando** (US 5,889,124).

16. As to claims 57-59, 67-69, Ando teaches a curable composition having components (d) a carbonyl compound, (e) curing catalyst, (col. 1, ln. 47-61) and a vinyl polymer, from monomers including methyl methacrylate, having a reactive silicon containing group, where the silicon containing group satisfies claim 57 (col. 3, ln. 59-col. 4, ln. 65) and where the carbonyl

compound includes dimethyl malonate (col. 7, ln. 5-11), and the curing catalyst includes amines (col. 7, ln. 36-41). Ando does not teach that the silicon group is at the terminus of the vinyl polymer. However, it would have been obvious that the silicon group is at the terminus of the vinyl polymer because the backbone of the vinyl monomer taught by Ando does not contain any silicon groups (col. 4, ln. 1-35) and Ando teaches there is at least one silicon group per vinyl polymer (col. 5, ln. 6-9).

17. Claims 62 and 65 recite properties of the claimed polymers, being at a liquid state at 23°C and molecular weight distribution; and Ando teaches the same polymers as currently claimed. It is therefore inherent that the polymers of Ando are liquid at 23°C since such a property is evidently dependent on the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

18. As to claims 63-64, Ando does not recite whether the vinyl polymer is synthesized by living radical polymerization or atom transfer radical polymerization. However, it would have been obvious that the vinyl polymer is formed through living or atom transfer radical polymerization because these polymerization methods are well known in the art. In the alternative, claims 63-64 are recited in the product by process format by use of the language, “synthesized by...” Case law holds that:

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

19. To the extent that the process limitations in a product-by-process claim do not carry weight absent a showing of criticality, the reference discloses the claimed product in the sense that the prior art product structure is seen to be no different from that indicated by the claims.
20. As to claim 77, Ando describes all the ingredients in a single composition (col. 1, ln. 50-61) and thus is a one component composition.
21. As to claims 78-79, Ando teaches a tin condensation catalyst can be present (col. 7, ln. 23-28).
22. As to claims 80-81, Ando teaches primary amines such as butylamine (col. 7, ln. 36-40).
23. As to claim 82, Ando teaches the presence of an oxyalkylene polymer (col. 1, ln. 50-61).
24. As to claims 83-85, Ando teaches one pack curable compositions, used in fields of adhesives and laminates (col. 1, ln. 5-18).
25. In the alternative, Applicants attention is drawn to MPEP 2111.02 which states:

[I]f the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. (MPEP 2111.02)
26. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim. It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. "a sealant, liquid gasket, or adhesive", recited in the present claims does not result in a structural difference between the

presently claimed invention and the prior art invention and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

Response to Arguments

27. Applicant's arguments filed 4/14/2010 have been fully considered and are persuasive in part.

28. In view of the amendments, the anticipation rejections provided in the previous Office Action are withdrawn. Notably, claim 57 now requires the presence of a compound (II), which was previously presented in the alternative. Neither Patent '038 nor Fujita teach the compounds recited as compound (II), and therefore do not anticipate the instant claims.

29. The 1.132 Declaration by Jiro Okai ("the Okai Declaration") submitted on 4/14/2010 is acknowledged. The Okai Declaration provides data comparing the skinning time of compositions using dimethyl adipate, diisodecyl phthalate, and dioctyl adipate. It is noted that the data in Table 1 of the Okai declaration of diisodecyl phthalate is not indicative of unexpected results because the results could be due to the phthalate backbone as opposed to the isodecyl ester groups.

30. Regarding the comparison between dimethyl adipate and dioctyl adipate, it is noted that dioctyl adipate has a skinning time of over ten times that of dimethyl adipate. As the only difference between the "new example" and the "new comparative example" in Table 1 of the

Okai declaration is the number of carbon atoms in the ester compound, it is clear that dioctyl adipate and dimethyl adipate cannot be used interchangeably.

31. Therefore, the 103 rejection over Fujita in view of Furukawa is withdrawn.

32. While the data does clearly distinguish between methyl and octyl esters, it is noted that no comparison is made with butyl esters. The previous Office Action presented a 103 rejection over Fujita that showed that Fujita used butyl oleate and dibutyl sebacate in polymer compositions. The butyl oleate and dibutyl sebacate taught by Fujita are homologs with the claimed methyl oleate and dimethyl sebacate because they differ by only three $-CH_2-$ groups. It is the examiner's position that it would have been obvious to one of ordinary skill in the art to expect similar beneficial results with compounds having only additional $-CH_2-$ groups. Case law holds that homologs are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). Applicant has not presented any argument or evidence to rebut the obviousness of methyl groups in view of butyl groups.

33. Thus, the 103 rejections over Fujita used alone, and Fujita in view of Inoue are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. BOYLE whose telephone number is (571)270-7347. The examiner can normally be reached on Monday-Thursday, 9:00AM-5:00PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert C. Boyle/
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796